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| APPLICATION NO.                   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------------------|-------------|----------------------|---------------------|------------------|
| 10/714,636                        | 11/18/2003  | Masanobu Saito       | 00684.003555        | 3255             |
| 5514                              | 7590        | 04/29/2005           | EXAMINER            |                  |
| FITZPATRICK CELLA HARPER & SCINTO |             |                      | CHEN, SOPHIA S      |                  |
| 30 ROCKEFELLER PLAZA              |             |                      | ART UNIT            |                  |
| NEW YORK, NY 10112                |             |                      | PAPER NUMBER        |                  |
|                                   |             |                      | 2852                |                  |

DATE MAILED: 04/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/714,636

Applicant(s)

SAITO ET AL.

Examiner

Sophia S. Chen

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 April 2004.  
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-46 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 1-44 is/are allowed.  
6) ☒ Claim(s) 45 is/are rejected.  
7) ☒ Claim(s) 46 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 18 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/12/04.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. Figures 13 and 14 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 17 (page 5, line 27). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 36, 37 (Figures 1, 3, and 10), A (Figures 1 and 2), 12Bk, 12C, 12M, 12Y (Figure 1), 14Bk, 14C, 14M, 14Y (Figures 1 and 13), 11Bk, 11C, 11M, 11Y (Figures 1 and 13), 18Bk, 18C, 18M, 18Y (Figures 1, 3, 10, 13, and 14), 20Bk, 20C, 10M, and 20Y (Figure 13). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to because Figure 2 contains a lead line (pointing to the development blade) without a reference numeral assigned. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the

appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

5. The abstract of the disclosure is objected to because of the inclusion of legal phraseology, such as "means" (page 83, lines 9 and 14). Correction is required. See MPEP § 608.01(b).
6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
7. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
8. The disclosure is objected to because of the following informalities:
  - a. Page 24, line 5, "(10) should be deleted.

- b. Page 26, line 5, "23" should be "26".
- c. Page 29, line 11, "23" should be "26".
- d. Page 31, line 10, "21" should be "71".
- e. Page 44, line 25, "5" should be "6".

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Naito (US Pat. No. 5,124,750) in view of Kawasaki (US Pat. No. 6,278,849 B1).

Naito discloses an image forming apparatus comprising: a plurality of developing devices 3 through 6, each of which includes a developing carrying member 3a (4a, 5a, or 6a) for carrying a developer T to develop an electrostatic image formed on an image bearing member 1 with a developer T (column 5, lines 20-34 and Figure 1); and a common voltage applying means 55 for applying a voltage to the developer carrying member 3a, 4a, 5a, or 6a (Figure 1).

Naito differs from the instant claimed invention in not disclosing each developing device including a developer regulating member, and a common voltage applying means for applying a voltage to the developer regulating member.

Kawasaki discloses an image forming apparatus comprising a developing device having a developer carrying member 4, a developer regulating member 5, and a common voltage 11 applied to both developer carrying member 4 and developer regulating member 5 (Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the structure of the developing device (with a developer regulating member and the common voltage) as taught by Kawasaki in place of each developing device of Naito to prevent deterioration of image quality due to leakage (Kawasaki, column 2, lines 24-34).

Because the voltage(s) applied to each developer carrying member 3a, 4a, 5a, 6a (Naito) is from the common voltage applying means 55, it would have been obvious to one of ordinary skill in the art that this common voltage applying means also applies a

common voltage (see voltage 11 of Kawasaki, Figure 1) to each developer regulating member (after combining Naito and Kawasaki).

***Allowable Subject Matter***

12. Claims 1-44 are allowed.
13. Claim 46 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
14. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not teach or suggest an image forming apparatus comprising a common voltage applying means to the developer regulating members, wherein voltages applied to the developer carrying members are variable independent from each other.

***Other Prior Art***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yang et al. (US Pat. No. 3,965,862) discloses an image forming apparatus comprising a plurality of developing devices; each developing device having a developer carrying member and a developer regulating member; and a common voltage applying means for applying voltages to the developer carrying members.



Enomoto et al. (US Pat. No. 5,678,130) discloses an image forming apparatus comprising a plurality of developing devices; each developing device having a developer carrying member and a developer regulating member; and a common voltage applying means for applying voltages to the developer carrying members.

Kodama (US Pat. No. 6,223,004 B1) discloses an image forming apparatus comprising a plurality of developing devices; each device having a developer carrying member and a voltage applying means; and an environmental sensor.

Toyama (US Pat. Pub. No. US 2004/0141766 A1) discloses an image forming apparatus comprising a plurality of developing devices; each developing device having a developer carrying member and a developer regulating member; and a common voltage applying means for applying voltages to the developer carrying members.

Enomoto et al. (JP 06-019297 A) discloses an image forming apparatus comprising a plurality of developing devices; each developing device having a developer carrying member and a developer regulating member; and a common voltage applying means for applying voltages to the developer carrying members.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (571) 272-2133. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sophia S. Chen  
Primary Examiner  
Art Unit 2852

Ssc  
April 27, 2005